

Mitchell (J. D.)

LECTURE

ON

EPIDEMIC CHOLERA,

DELIVERED IN THE HALL

OF THE

PHILADELPHIA COLLEGE OF MEDICINE,

IN

MAY, 1849,

AT THE REQUEST OF THE MEDICAL CLASS,

BY

THOMAS D. MITCHELL, M. D.,

PROFESSOR OF THE THEORY AND PRACTICE OF MEDICINE IN THE PHILADELPHIA
COLLEGE OF MEDICINE, AND LATE PROFESSOR IN THE MEDICAL DE-
PARTMENT OF TRANSYLVANIA UNIVERSITY, LEXINGTON, KY.

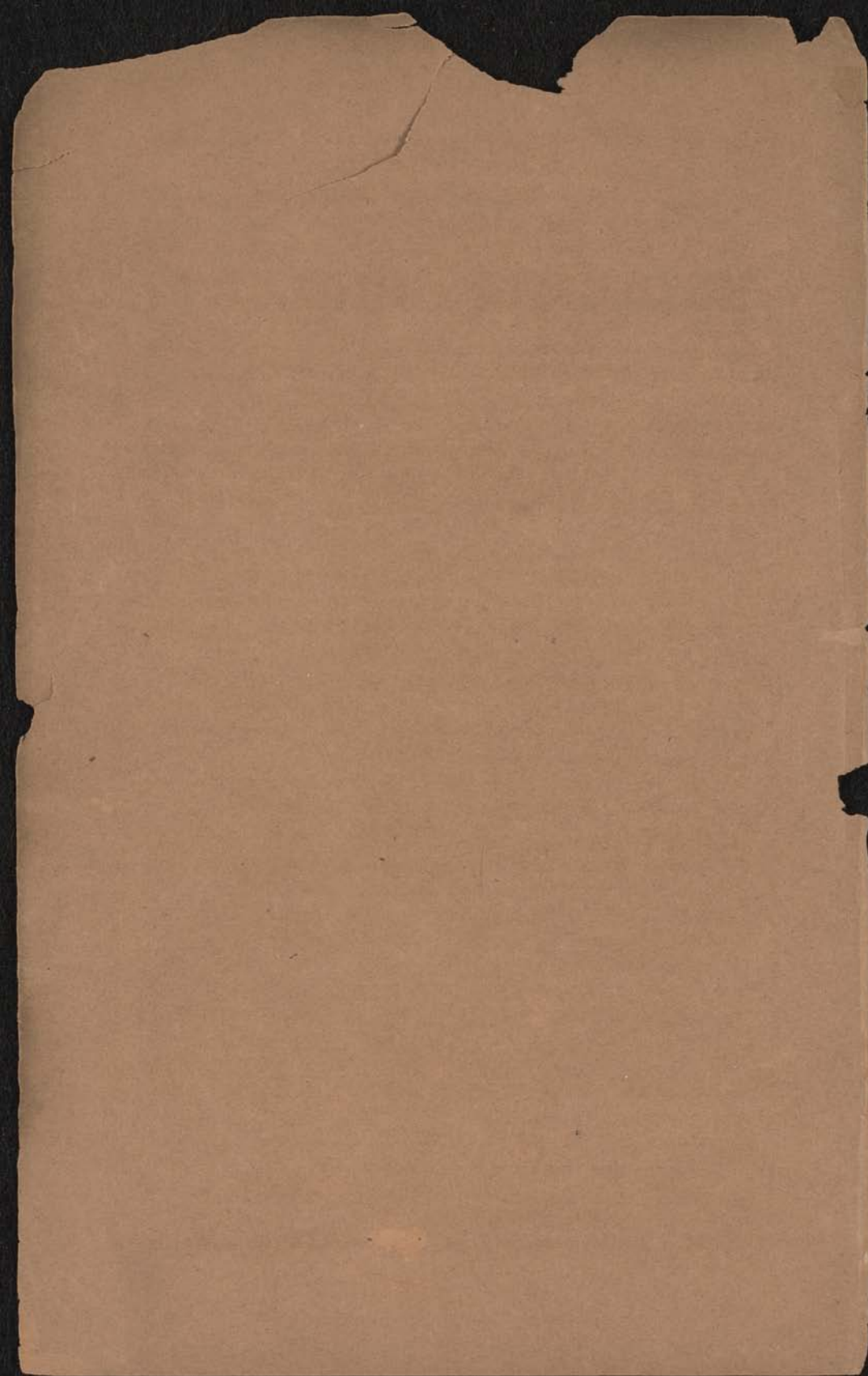
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Philadelphia, May 27th, 1849.

PROF. THOS. D. MITCHELL, M. D.

Dear Sir—At a meeting of the Class of the Philadelphia College of Medicine, held in the Anatomical Theatre, on Thursday afternoon, May 24th, 1849, Mr. Carlisle Terry, of Georgia, was called to the chair, and Mr. J. S. Houghton, of Mass., was elected Secretary. On motion, it was unanimously resolved to request a copy of your valuable and instructive Lecture on Epidemic Cholera, or such an abstract of it as you may find convenient, for publication, and the undersigned were appointed a Committee to carry the resolution into effect.

Respectfully yours, &c.

C. MURPHY, of South Carolina,
J. W. EARLS, of North Carolina,
J. H. BRYANT, of Louisiana,
J. B. S. HOLMES, of Georgia,
THOS. GARWOOD ROWAND, of Pennsylvania.
J. H. ALDAY, of Bahamas, W. I.
HENRY M. BORDEN, of New Jersey.
T. G. WORMLEY, of Pennsylvania.
GEO. W. MANSON, of do.
J. W. STAGGERS, of South Carolina,
W. F. GIBSON, of do. do.
A. WESLEY WRIGHT, of Pennsylvania,
J. HUTCHINSON, of Canada East.

To Messrs. MURPHY, EARLS, &c. &c.

Committee of the Medical Class,

GENTLEMEN—I herewith send you a copy of my Lecture on Epidemic Cholera, embracing substantially all that I said on that subject. As I made use of a mere skeleton in the delivery of the discourse, and have since written out from memory, what is believed to be the pith of the Lecture, it is possible that some portions may seem to have a new dress. The matter of the lecture, whatever it may be worth, is unchanged. If its publication can, in the least degree, subserve the interests of suffering humanity, I shall be amply rewarded.

Very respectfully, yours, &c.

THOS. D. MITCHELL,

No. 297 Pine St., Philadelphia, }
May 29th, 1849. }

LECTURE ON EPIDEMIC CHOLERA.

Gentlemen,

In compliance with your request, I am now about to take up the subject of Epidemic Cholera, although a little out of its proper place in my course of lectures. The great importance of the topic, just at this moment, when it is spreading desolation in so many parts of our country, seems to be a sufficient reason for its introduction here.

You are all probably aware, that this terrible malady is known by the various appellations of *Epidemic*, *Malignant*, *Asiatic*, *Algide* and *Asphyxiated* Cholera, and that it is, beyond doubt, essentially of the same general nature with very grave cases of the disease, so faithfully delineated by Sydenham and others, under the name of *Cholera Morbus*. It may be well to remark, just here, that in the course of my pupilage in this city, I saw several cases of the last named disease, which ran their course to a fatal termination in less than twelve hours. And who can fail to perceive, that such cases in very frequent connexion in the same town or city, would have been equivalent to the real Asiatic Cholera? The same disease, precisely, is graphically described by Johnson in his admirable work on the Diseases of Tropical Climates, and the epithet, *Mort du Chien*, not inappropriately refers to the violence and frightful rapidity which stamped the cases of which he spoke.

You will not expect a history of the disease, in this lecture. To do any thing like justice to that branch of the subject, would require more time than I expect to devote to the whole theme. Nor is it in any sense necessary, to consume your time, with details that have long been so familiar to the profession. Suffice it to say, that the first authentic account of its epidemic appearance was furnished by its prevalence at Madras, in 1774, since which period it has found its way into various parts of the old and new world, destroying millions of the race. Its route then, as it has been since, was as capricious and erratic, as the course of the wind, which bloweth where it listeth; coming and going, heedless of the scrutiny of philosophical analysis, though governed, doubtless, by the omnipotent energy that moulded the universe.

You will not be slow, Gentlemen, to conjecture from the remark just

made, what views I hold, touching the origin of this pestilence, and as this mysterious point is closely interwoven with its ætiology, your attention will be directed for a moment to

THE CAUSES.

Here, too, my range shall be very much circumscribed. The causes of Cholera have been the occasion of untold embarrassment to the profession, the world over. Not a topic in the vast field of medical science has produced half so many volumes in so short a period of time, as flowed from attempts to search out the hidden and mysterious ætiology of this subject. And still we are in the dark, and for aught I can see to the contrary, we are likely to remain as we have been.

I am aware, that men of science and learning, in common with the most ignorant and stupid, have clung to the *animalcular* theory, with a tenacity that indicated their sincerity, at least. Well do I remember, the man of ebony, who at the corners of the streets in Cincinnati in 1832, with bell in hand, warned the good people of the imperious need of boiling all the water intended for the family, in order to kill the animalculæ, and so to defy the approach of Cholera. But his warning voice was to the swift-winged messenger, as the passing breeze, unheeded and unfelt.

The *cryptogamous* theory, or the doctrine of *fungous germs* also came in the category of alledged causation, to tell us how thoroughly the vasty deep of Nature's murky recesses had been fathomed. But alas! for theory, this device failed also. The line had not length enough to find the bottom of the unexplored profundity.

The theory of *miasmatic exhalations*, *malaria*, and the like was not lost sight of in this investigating scrutiny. And even at this day, there are those who think that epidemic Cholera is attributable to the same causes that give rise to periodical fevers. But most unfortunately for all the theories already named, and at a period too, when we least expected the developement, this scourge of the world raised its hydra head amidst perpetual snows and ice, with the mercury thirty below zero, doing its work of desolation on a scale most terribly appalling. We had been familiar with its march under a burning sun, and in a temperate latitude, and seemed to have a warrant for the theoretical speculations of the day, under the false notion that it was a disease of warm weather, exclusively. Russia told a tale, however, in this relation, which if it did not absolutely and forever annihilate these speculations, did most assuredly proclaim their utter incompetency to solve the grand enigma of causation.

Nor did *Contagion*, though pressed with all the ingenuity that science could command, in the smallest degree, remove the difficulties of the

case. And notwithstanding the well known truth, that the vast body of the profession is erect and unbending in respect of this unmeaning doctrine, there are some who still cling to it, a few who in other matters justly command our respect.

Some have taught that Cholera must be contagious, because it seems to follow the great water courses, and thus to be carried from place to place, in and near to those vast thoroughfares. But who that has lived in Missouri or Illinois does not know, that Intermittents and Remittents, simple and grave, not only follow, but often seem to adhere to the small and the greater water courses there? It is quite notorious, that by far the greater number of cases of periodical fevers will be found, in a series of years, along the little streams, often misnamed rivers, and that fatal dysentery, not unfrequently takes the same direction. Yet we do not for this reason pronounce those diseases to be contagious, because we know, if we know any thing at all touching the cause of disease, that they are born and grow up on the spot, and need not the mystic agency of contagion to account for their being and propagation.

But there are facts, almost without number, whose unavoidable tendency is to nullify the doctrine of contagion. We do not now refer to the thousands of cases of exemption from the disease, in the face of frequent and even constant exposure. But we allude to such facts as the following, a fair analysis of which cannot fail, as we believe, to prove the utter folly of the doctrine in question.

Epidemic Cholera has suddenly made its appearance in a place, and after having done its work of death, has just as suddenly departed. In July, 1832, it came like a meteor's flash to Cleaveland, in Ohio. The constant intercourse between that place and Cincinnati, excited a terrible panic in the latter city, and a commission was ordered to go to the former place, to study the disease, and so to be prepared for its appearance in the queen city. I was requested to serve as one of the Commission, but ere we could get in readiness for the duty, notice came that the scourge had left as suddenly as it made its appearance. The alarm ceased and was not even partially revived, until late in September of the same year, when it came, as if let down from the clouds, like a tempest of wrath. From what point on earth it emanated, none could tell, for between Cincinnati, and Baltimore, and Philadelphia, and New York, were twenty towns and cities, which as yet had not known its visitation.

In 1832, Lexington, in Kentucky, enjoyed immunity from the pestilence; and it was fondly hoped that its beautiful locality and proverbial healthfulness, added to its comparative lack of intercourse with the great water course, would perpetuate this blessing. But in 1833, the storm came with awful violence. In little more than a month, with less

than half the usual population on the ground, five hundred victims crowded the grave yard. And there, as in other places, not the slave only, but his wealthy master shared the sad doom. Place, station, possessions, all failed to give protection. The medical men of the city suffered not a little; and to help in the extremity, the physicians of Versailles came to the rescue. This town is distant 12 miles, and as the road is of the finest structure, the intercourse was then, as it is now, almost without interruption. But the disease went not thither, but spent its power on Lexington. In 1834, Versailles was destined to have its part in the tragedy, and regarding its small population, the mortality was more terrible, than it had been in Lexington, in 1833. The Physicians of the latter place returned the kindness of their professional brethren, and did what they could by personal labor, to mitigate the terrors of the scene. But the disease was not carried to Lexington, nor any where, but ended its career on the spot.

Far away in the West, in the town of Palmyra, Mo., in June, 1835, most frightful havoc marked the footsteps of the monster. A population of less than a thousand lost 140 in four weeks, by Cholera. I arrived there but a few days after the last case had ended fatally. It was impossible to tell whence it came, or whither it went. The nearest river town was Hannibal, 13 miles distant, on the upper Mississippi, and although steamboats were daily stopping there, it had no visitation of Cholera. I landed there and remained two or three days, before I could be conveyed to Palmyra, but I heard of no case of Cholera that had occurred in Hannibal during the season.

But I have a fact yet more in point. By letter received from Lexington, Ky., dated May 19th, 1849, I learn that no case of Cholera had occurred in the city proper, but that six cases, two of which proved fatal, happened in the State Lunatic Asylum, which is in a secluded farm spot, in the suburbs.* I need not inform you, Gentlemen, that a secluded Lunatic Asylum is the last place in which a rational man would look for cases of a *contagious* disease, as the first manifestations of an epidemic. How Cholera could find its way to the helpless inmates of such an establishment, shut out as they are almost wholly from society, I do not pretend to say. Yet I do know very well, that the first case of small pox known in Lexington, in one of the years of my residence there, was in the person of a lunatic, who had not been off the premises for the space of three years, and whose room was in the third story of the edi-

* This intelligence is fully confirmed by an editorial in the Lexington Observer and Reporter of May 23d. "Up to yesterday, the 22d instant, there have been fifteen cases and four deaths by Cholera at the Lunatic Asylum. The cases are exclusively confined to the Lunatics, not an officer nor attendant having been seized. The disease originated among the inmates of the establishment."

fice. Most firmly do I believe that the cases of Cholera and Small Pox, thus appearing in the Lunatic Asylum of Kentucky, wholly apart from the least probability of contagion as a cause, are explicable on the same principle that would satisfactorily tell us, how the first case of either disease, ever known to the world, had its origin. Common sense teaches, that the *first* patient did not take the disease from *any other person*, for that was impossible. It was a new development in the history of man, and came directly from the hand of Deity. And thus it may be with every returning pestilence that for years ceases, and then comes (from whence none can tell us) to do its work of death. Let those who smile or sneer at this solution, name a better if they can, and we pledge, at least, our respectful consideration. It is quite certain that medical history furnishes instances of the unexpected appearance of Scarlatina and Small Pox in very retired localities, that could not be traced on the principle of contagion, and these diseases have just as mysteriously vanished as they came.

But many have imagined that *season* has somewhat to do with the causation of Cholera. Nor will I presume to deny that warm weather is much more likely to give diffusion to the Choleraic poison, than cool or very cold weather. This seems to be very generally agreed; and yet it is equally certain, that the most desolating developments of this disease may be seen in the frigid North, in the regions of perpetual ice. I will not occupy your time further, on this point, however, but proceed at once to state

THE SYMPTOMS.

And notwithstanding a gentleman of very high sounding pretensions, has boldly affirmed, that "there are *no* Premonitory symptoms, that these are the disease itself," &c. &c., I take the liberty, based on no very meagre acquaintance with this whole subject, to affirm, that there are *Premonitory* signs or symptoms, a just appreciation of which is calculated to save, as certainly as the disease tends to destroy. To meet these signs or symptoms, you must know what they are, and how they should be disposed of. This knowledge will lead you to give just cautionary advice, ere the enemy has taken actual possession of the citadel.

I have said, that although an alarm reached Cincinnati in July, 1832, Cholera came not until late in September: yet, it is well known that in July, August and September, vast numbers of the citizens were laboring under looseness of the bowels, dejection of spirits and nervous uneasiness, which was wholly inexplicable. You could scarcely meet a friend whose condition in these respects was not similar to your own. Supposing it to depend on the water we drank, I removed to a central part of

the city, but without relief. Claret and water became a very general beverage, in view of its mild astringency; and very sure am I, that it was beneficial in its operation. Still this *Cholerine* or *Diarrhœa*, call it as we may, continued to harass. Many, wearied by its long continued and frequent assaults, forgot or neglected the means suited to the emergency. The poison, in its utmost concentration, at length began to display its power. The looseness was more constant and profuse, and more generally accompanied with abdominal pains. These continued to be *premonitory* or initiatory symptoms, after the last week in September, when the consternation commenced.

It is worthy of remark, that apart from the intestinal derangement referred to, as seen throughout July and August, the City of Cincinnati enjoyed unusual healthfulness, although the predictions based on the flood of February, had squinted strongly in a different direction. Had the mere local causes, related to that memorable aquatic catastrophe, been the really efficient agents in the production of Cholera, the result should have appeared much earlier in the season. Hundreds of cellars had been filled with water, and vast quantities of merchandise spoiled, to say nothing of the destruction of vermin and insect life, and the decomposition consequent thereto.

The looseness of the bowels named was sometimes accompanied with increased appetite, though more frequently with sick stomach and disrelish for all kinds of food, great mental depression, general uneasiness, and the like. And all these were often observed after the first of October, as well as in July and August, independently of what were called *rice water* discharges.

Many individuals were seized with these symptoms, when it was generally understood that Cholera was in the City, at midnight, or somewhere between sunset and sunrise. Often they were alone, lodging in stores or elsewhere, having no sort of assistance, until the disease had assumed a formidable aspect. It is in view of facts like these, that I would urge upon you, gentlemen, the importance of warning your neighbours and friends, not to retire to bed, when Cholera is in their midst, without seeking proper advice, or using proper means, if they feel the slightest disturbance of the stomach or bowels. The mere act of repose in bed may sometimes suffice, but alone it cannot be trusted, and such should be your decided testimony.

In not a few cases, the attack is ushered in with profuse watery purging or vomiting, or both, the evacuations being forced out as if some mighty power unseen was pumping out the fluids. Sometimes there is no obvious or appreciable chill or coldness, and very little griping pain, and vice versa. Very often the cramps are terribly severe, in the whole

alimentary canal, and in the muscles of the lower extremities, from the first; in a few cases these are almost the only manifestation of disease, and they kill speedily by their violence.

We have purposely avoided the division of the disease under review into *stages*, because, in point of fact, such a division is utterly out of the question, at the bedside. Cholera is one of those terribly and rapidly fatal maladies, in very many instances at least, that defies the utmost ingenuity to fix the line of demarcation, here or there, so as to decide, even with tolerable certainty, where one stage ends and another begins. There is often a complete inversion of the order of these stages too, so that, for all practical purposes, the division is of no value. And however beautiful a well arranged system may appear on paper, the matter of fact practitioner pays little or no respect to it, as a guide; and in truth he rarely even calls it to his recollection.

The cramps and evacuations, already named, are frequently blended in the same case, though not invariably. The latter, as they first escape from the bowels, are sometimes nearly natural, but in a few minutes they assume the aspect of a turbid, opaque fluid, not unlike dirty whey, or thin gruel, or rice water, and hence the phrase, *rice water* discharges. Some have represented these as exceedingly fœtid, yet they are occasionally almost void of fœtor, emitting only a very *sickly* odor, and for this reason, the vessel should be speedily removed from the sick room. The quantity of the discharges is often astonishingly great; amounting to a gallon, and frequently exceeding a half gallon, at one operation. Sometimes they seem to pass without the consciousness of the patient, or at all events, independently of any obvious effort. And if cramps have not been manifest before this period, they are apt to come now with terrible severity, causing the stoutest man to cry out, as in agony. These cramps are sometimes incessant, pervading the muscles generally. In not a few persons thus seized, there is also headache, or vertigo, deafness or ringing in the ears. And if any doubt existed as to the presence of what is called the state of *collapse*, before, that uncertainty is now removed. The patient is pulseless, his whole surface of an icy, yet clammy coldness, the skin intensely livid, and the blueness or lividity pervading the tongue and the mouth.* The eyes are sunk, hollow; the countenance frightful, marked with deep despair. The hands and feet look as if they had been long soaked in hot water, shrivelled, shrunken, withered. The skin has lost its elasticity, so that if puckered between your thumb and fingers, it remains thus for some time. There seems to be and there actually is, a general diminution of the volume of the

* This obvious change in the colour of the skin, gave to the disease, many years ago, the name of *Blue Plague*.

body. If you try to bleed, perhaps no blood will flow, or it will be a semi-fluid, or a tarry mass which will not separate as the blood of health will do.

Sometimes these symptoms or marks of *Collapse* come very early, and the patient will have most distressing heat of stomach with intense thirst, and strong desire for cold drinks which are often ejected with great force, almost immediately. There is very generally, a manifest suppression of urine and arrest of all the secretions. The voice can scarcely be heard, the respiration is greatly embarrassed, and the circulation, of course, very much deranged. The patient tosses in bed, and cannot be kept in any posture long. Yet amidst all the physical uproar, the mind is often calm, the intellect clear, the memory good as ever.

At the end of 12, 24 or 36 hours, the more violent symptoms may subside, the discharges and cramps cease, so that a stranger to the disease might be tempted to expect a favourable issue. But if you feel for the pulse, you cannot find it; the skin is cold as ever and coated with a clammy sweat. Death soon closes the scene.

If, however, with the cessation or abatement of the discharges and cramps, you find a decided improvement in the pulse and skin, if the respiration becomes more natural, and the general uneasiness be moderated, you may begin to hope for a favourable reaction, or you may even conclude that this has taken place already. Soon the bile begins to flow naturally, the secretion of urine is restored, and recovery is almost certain.

The *leadен color*, the *reduced temperature*, and the *rice water* discharges, claim a special notice. The *first* is obviously the effect of the presence of dark blood in the capillaries, the blood having lost nearly all its water or serosity, by purgation. The *second* depends on defective arterialisation of the blood, by reason of imperfect circulation. Deteriorated blood is sent to the lungs, and of course defective animal heat is the consequence. And here it is proper to notice the blood itself, in the light of chemical analysis. It is proved to have lost half its due proportion of serosity. There is also a great diminution of fibrin, and a total absence of saline matters. These aberrations from the blood of health teach us the cause of the peculiar appearance and consistence of the blood, as found in Cholera. There is, moreover, a highly poisonous agent detected in Choleraic blood, viz. *Urea*, and this is dependant on the suppression of urine, which being long continued, gives a perverted action to its constituents. The poisonous urea is destined to be eliminated from the system, by the discharge of urine; but when thus retained, it blends with the blood, and deteriorates it.

The *rice water* discharges are mainly composed of the serous part of

the blood. They are distinctly alkaline, having shreds or flocculi, not unlike boiled rice suspended in the fluid. Those being heavier than the fluid, fall to the bottom of the vessel. The liquid portion consists of water, carbonate of soda, and the other saline ingredients of the blood; it contains no albumen, casein, nor bile.

In concluding the *symptoms*, I remark that malignant Cholera presents considerable variety, in several respects. We do not always find vomiting, purging and cramps, together. A case rarely ends fatally in this country, without any evacuations from the bowels. In India, it has been otherwise, and patients have died simply from the severity of the cramps. In such cases, the contractions of the intestines shut up the contents and hence great distention is discovered after death. Now and then, death occurred in this country, without either cramps or vomiting, and the result was due to the terrible exhaustion caused by the incessant and profuse discharges, per anum. Of 60 cases reported by Dr. Jackson, in his Cholera report in 1832 in Paris, there were only 2 with no vomiting and 5 without cramps.

THE DIAGNOSIS.

It is not difficult to distinguish Epidemic Cholera from every other form of disease, excepting very grave cases of Cholera Morbus, and perhaps some cases of poisoning by other agents than that which induces the epidemic disease. And when cases apparently of ordinary Cholera Morbus, greatly multiply and frequently prove fatal, in a town or village, the suspicion, that the Asiatic malady is at work, may be regarded as well founded. It is of little consequence to the community, by what name we designate the malady that prostrates its victims suddenly and fatally, by scores and hundreds. Nor are we justifiable in attempting to hide the truth by a resort to mere technicality.

THE PROGNOSIS

May be given, unhesitatingly. If the patient can be seen at the earliest moment of attack, his recovery can hardly be doubtful, excepting in the comparatively rare instances of entire and immediate collapse, induced by the concentration of the poisonous agency, whatever it be. The later in the seizure the application of remedies, the smaller the probability of success. Depraved constitutions are, generally, to be regarded as hopeless. Children are much less liable to attack, than grown persons; few died between 15 and 20 years of age in this country, while not a few fell in the decline of life. In some of the Western towns and cities, more than half of all who were seized, died. The greater the severity of the early symptoms, the more unfavourable is the case. Very few recoveries took place after collapse, and according to some writers, none.

THE ANATOMICAL CHARACTERS.

Although many hundred dissections have been made of persons dead of Cholera, the knife has made no developments that are calculated to aid us in the treatment. Morbid anatomy has not elucidated the pathology, in the smallest degree. Morgagni said long ago, that fevers and all diseases that ran to a fatal termination in a few hours, often failed to leave any obvious lesion that could serve to explain the morbid phenomena, as developed before death. His remark holds good in reference to Epidemic Cholera. In very many instances no sort of lesion could be found, and those that were detected, varied in different subjects so as to avail nothing for pathology. Sometimes a slight patch of blush has been seen in the mucous coat of the stomach, and frequently even that was lacking. Slight changes have been noticed in the glands and follicles of the intestinal canal, but not always; more frequently there was increased vascularity and thickness of the mucous coat. The changes, if any, are not unlike those which follow the poisonous action of *Lobelia inflata*. In June or July, 1832, a printer died in Cincinnati, very suddenly. He had been at his lodge of Masons or Odd Fellows in apparent good health, returned to his lodgings at ten o'clock and went to bed. Before midnight he was taken ill, sent for a steam doctor, who puked him to death with lobelia. The case excited great interest, as the deceased was extensively known and died after an illness of only 8 or 10 hours. His body was taken by special request to the anatomical theatre of the college, and a post mortem examination was made in the presence of a large assembly. The mucous membrane of the stomach and bowels was nearly natural, no lesion being present that could shed light on the case. And the remark was often made in the October following, when the Asiatic Cholera was raging, that had the man died then, without treatment or even with better management, the case would have been called *Cholera*.

My own opinion that the most important pathological alterations are to be found in the blood, is not original, though before alluded to. Time will probably make that to be the grand original focus of the *materies morbi*.

THE PATHOLOGY

Has been hinted at, but certainly we are quite in the dark on this point. It is clear that we learn nothing satisfactory from the revelations of the knife. And although I have often imagined a very close analogy between this disease and the congestive fever of the South, I do not know that such analogy, if made out, would fix the pathology of either. Deep internal congestion is certainly present in both, and the common cause is undoubtedly a concentrated, secret, intangible poison. In both too, the

nervous system often suffers terribly; much in the same way, as in the case of the morbid effects of many acknowledged poisons. We alluded before to morbid changes in the blood, and need not now repeat.

THE TREATMENT.

We have not a doubt, that if this disease be met, fairly, in what we have designated as the premonitory stage, it can be controlled. The medical man who has cognizance of a case thus early, should enjoin absolute rest, forthwith. Many a person slightly troubled in the bowels, having some pain and a little looseness, has imagined that he could attend to his business till evening, and that rest would then suffice. Perhaps he has taken a little medicine, fondly hoping for the best. The erect and walking state have operated sadly on his digestive organs. The sense of weight and bearing down have augmented, and the evacuations have frightfully increased, and the case is perhaps, a hopeless one. Had the man retired to his couch instantly, when first he felt uneasy, even that might have sufficed; and if he had taken a small amount of proper medicine at the same time, all would have been well.

The patient may not only have a slight diarrhœa, but the real *rice-water* discharges may have appeared, and yet the case is manageable with calomel and opium. Nor is it needful to administer very large doses, as I know by happy experience. Ten grains of calomel with one of opium, and perfect rest, will often afford great relief.

During his visit to this country in 1844, Dr. Scudder, who has been a missionary in India for nearly thirty years, spent some days in Lexington, Ky. I was desirous to learn from his own lips, how he treated the endemic Cholera of that country, knowing as I did, that it was an annual visitant, and sometimes terribly fatal. He assured me, that he had no difficulty if he saw his patient very early; and that it was his custom, to give from 10 to 15 grains of calomel, with from 1 to 3 grains of opium, combined at a dose, and to repeat in one, two or three hours, if necessary. In a letter from the same gentleman written since his return to India, and published in the Missionary Herald, the same statement is given, at least in substance.

In 1832, I generally advised the use of a hot bath to the feet and legs, two or three times a day, in addition to absolute rest in bed, and the dose of calomel and opium, directing for diet, a little arrow root or gruel, spiced with nutmeg, and in some instances, warm fomentations to the epigastrium.

An expedient was adopted in 1832 in the West which was often injurious, though intended as a preventive. I allude to plasters of burgundy pitch, 8 or 10 inches square, applied warm to the pit of the

stomach. Thousands of these were manufactured and sold, and, I doubt not accelerated attacks of the disease. A distinguished member of the bar called on me, in a state of perturbation, to seek advice. Said he, "I feel miserable, at home or at my office. I cannot think on any subject; I feel unstrung, fidgetty, I can scarcely tell how I feel." I suspected the cause. Have you not a pitch plaster about you, sir? "Yes," was the reply, "and I was told that it would be of great service, but I begin to think it is doing harm." I advised its removal forthwith, and learned soon after, that all his troubles vanished. The plaster added to his mental uneasiness; it was a positive irritant, augmenting his fears, and so preparing the way for an attack of the prevailing disease, which was happily averted by removing the offending cause. This individual had no purging, nor in fact, any obvious symptom of the disease; but even as it was, I advised him to observe a horizontal position, as much as possible, believing this to be the best advice.

But if you are called to a patient, severely cramped, cold, and yet purging or vomiting or both, the indications are not quite so simple. And here allow me to direct your attention, for a moment, to the confusion of tongues that has found its way into the profession, in regard to the treatment of undoubted Cholera. If you consult No. 8 of *Ranking's Abstract of the Medical Sciences*, you will find a short summary of the practice reported as successful, by 26 physicians in various parts of the world. Of these 5 think well of blood-letting, 5 advise calomel and opium, 1 has no confidence in mercury, 6 speak well of emetics, 2 rely on chloroform, 1 lauds strychnia, 1 advises cannabine, 2 place great confidence in the sulphate of quinine, and several put their patients in warm beds, treating them with internal and external stimulants. And great as this disparity may seem to be, a reference to the journals will show that the range is yet wider. Nor is this a reason why you should doubt the efficacy of medicine, entirely, as some have insinuated. I have no doubt, that the gentlemen who have reported success with such variant practice, have told the honest truth. The doctrine is not novel to you, for I have often asserted it, that the special circumstances of different locations, the agency of season, of weather and other causes that may not always lie on the surface, are amply sufficient to modify disease, so that it shall yield to very dissimilar treatment, and yet be essentially, in all cases, the same disease. On no other principle can we explain the opposite, yet successful practice in yellow fever, as made out incontestibly from evidence that no honest man ought to doubt.

In very severe attacks of Cholera, the most persistent efforts to restore warmth to the surface, to allay the cramps and check the discharges, will fail. Yet by long continued friction with irritants, as the capsicum em-

brocation, the lotion of Granville, spirits of turpentine and tincture of cantharides, we sometimes afford marked relief. The hand, the flesh brush, medicated flannel, the hot air and vapor bath, all may be usefully tried.

Believing in the close resemblance of Cholera to Southern Congestive Fever, some have resorted to the cold dash, to cold water sheets around the body, to the cold bath, &c. It is asserted that the discharges have been speedily checked and a happy re-action established in this way. And certainly, when all ordinary means are frustrated, it is wise to make trial of these expedients.

I have heard a few gentlemen speak very confidently of the use of the lancet in Epidemic Cholera, and they have been governed in their resort to it, by the same rules that led Mackintosh to use it in the cold stage of Intermittents. Dr. Parker, in his researches on *Algid Cholera*, says, blood-letting was sometimes beneficial, and that too in the stage of collapse. Mr. Bell in the London Medical Gazette says that VS. was useful if resorted to in 3 or 4 hours after seizure, and especially if backed by sulphate of quinine. A writer in the *Provincial Med. and Surg. Journal*, approves of small bleedings in stout subjects, followed by calomel and castor oil. Dr. Wilson advises VS. when practicable, with mustard emetics and inhalation of oxygen. Dr. Shearman advocates VS. and transfusion of blood. Dr. Cowan thinks well of bleeding in robust persons.

I have known the lancet to be used in many cases, but never without injury; indeed, the expedient appeared to me to hasten the fatal termination in almost every case. When re-action is brought about, and febrile excitement runs very high, so as to endanger some important organ, moderate bleeding may do good.

Of the *Emetic* treatment, I cannot speak favourably. The best appliances of this kind, is the mustard emetic.

The *Saline* treatment of Stevens, based on the known deficiency of saline matters in the blood, has not accomplished as much as was anticipated from it. The internal administration is more easy, safe and salutary, than the plan of injecting into the veins, and will probably be worth a trial on a more extended scale.

The *Sugar of Lead* treatment, sometimes called the plan of Graves, has been carried out fully in America, on a much more vigorous scale than he ventured to adopt. The prescription of the Dublin physician was a scruple of acetate of lead, and 1 grain of opium, made into 12 pills, with conserve of roses, one of which to be taken every quarter of an hour, during the state of collapse; if the patient had not yet reached that state, the dose was a pill every hour, or once in two hours. Much larger

doses of the lead salt, with and without opium, were administered in this country, and sometimes with success. Its *modus operandi* is not difficult of solution. The decided astringency of the salt, and the anodyne property of the opiate, formed a happy combination to meet the excessive discharges, as well as the distressing pains. Yet the remedy often failed.

The *sulphuric acid* treatment of Dr. Greenhow, and the *nitrate of silver* treatment of Dr. Lever, seem to have been devised on the same principle that led to the use of the acetate of lead. Greenhow employed, with very frequent success, the following mixture: Take of the infusion of cloves, 6 ounces, diluted sulphuric acid 3iss, laudanum 24 drops, mix and give an adult two table spoons full, every hour till the discharges are checked, and afterwards, the same dose every 2 hours. The sulphuric acid obviates the unpleasant taste of the cloves, and renders the mixture rather agreeable.

The *nitrate of silver* was thus exhibited, as Dr. Lever tells us in the *Medico Chirurgical Review* for October, 1834. He gave 30 grains dissolved in 3 ounces of water at one dose. The vomiting speedily ceased, as did also the purging, and recovery soon followed. He rarely gave less than 10 grains dissolved in an ounce of water, at a dose.

I am aware, that those who have been familiar with doses of lunar caustic, under a grain, will be horrified at the mention of 30 grain doses. Yet I would be very strongly tempted to give it a trial. Its direct astringency and caustic power, backed by its known quality as a tonic, seem to commend it strongly for the case before us. As no one has made trial of this bold practice in America, so far as I know, it is hoped that it will not be overlooked when the epidemic shall make its appearance in our midst.

It is probable, that the success of the unlimited use of *ice-cold water* in the most absolute state of collapse, was due to an action not unlike that of the nitrate of silver, sulphuric acid, and the acetate of lead. You are all aware, that this expedient was tried with great success in Europe, and that a mere casualty led to its adoption, such as the one to which I am about to refer. A female, of the highest respectability, residing in a Western city, was given up (to use a common phrase) by her medical attendants, and the usual preparations were ordered in reference to interment. In this forlorn state, with a servant at her bedside to watch her last moments, she expressed a desire for *iced water*. A large pitcher was soon at her service, which she grasped with avidity, and could scarcely be satisfied without emptying it. The pitcher was again filled, and the icy draught most liberally indulged in. After the lapse of a few minutes she fell into a pleasant sleep, her skin regaining its natural temperature and a gentle perspiration covering the entire surface. This was

the crisis; and from that hour she rapidly convalesced, and is yet alive. The event to which allusion is now made, transpired in 1833, and the lady is personally known to the lecturer.

The *modus operandi* of *iced water*, in the case narrated, is entitled to a passing remark. How did it accomplish the result? We have seen that the lividity of skin which marks the disease in the state of collapse depends in part, on the total loss of the serosity of the blood, which is carried out of the system in the shape of rice water discharges. That serosity must be, some how or other restored, or death is inevitable. The experiments of Beaumont show, with what rapidity large draughts of water were removed from the stomach of St. Martin, by the agency of the absorbents; and in the case of the Western lady, the same energy disposed promptly of the large quantities of iced water of which she partook, and the fluid being carried into the circulation compensated happily for the loss of the natural blood serosity. The reduced temperature of the water exerted a tonic influence, probably, on the intestinal exhalents, and by sympathy with the cutaneous surface, brought about a salutary perspiration. Such is the theory, as I suppose; and if wholly unfounded, the practical fact remains, and challenges the attention of every man who expects to battle with the giant pestilence.

Allusion has been made to the analogy between Epidemic Cholera and Southern Congestive fever, whence has been deduced the propriety of employing with liberal hand, the *Sulphate of Quinine*, in the disease under review. Dr. Henriques, guided by this view of the matter, employed the sulphate in large doses, in all stages, together with stimulant embrocations, and bark injections with great success. He believed, too, that the disease was often prevented by the prophylactic use of the salt of quinine, taken in two grain doses, daily, during the epidemic prevalence. I know nothing, from experience, of the value of this practice, but am inclined to think it worthy of consideration by physicians resident in miasmatic regions.

Touching *alcoholic mixtures*, I have ever been unfavourably impressed. Their effects, in a moral aspect, have been terribly pernicious on the survivors of an epidemic; and it is questionable, whether they are as well suited to the exigency as some other forms of administration. It is reported, that brandy holding in solution, opium, camphor, cayenne pepper, cloves and the like, has been very efficient quite recently, in the far South, but my information is not sufficiently specific, to enable me to judge correctly in the premises.

Sulphuric Ether and *Chloroform* have claims to our regard, as remedial agents, acting specially, as we think, on the nervous system. A medical officer in a foreign country reports his own case. He was seized in the night, alone, and remote from ordinary medical appliances, yet in

a region where Cholera was raging. The only remedial agent in his possession was sulphuric ether, and as the cramps grew more and more severe, he put the bottle to his nose and inhaled the ethereal vapor, till, unconsciously, he fell asleep. His pains and distressing sensations vanished, a pleasant perspiration broke out, and he speedily recovered.

Chloroform acts very much as does the sulphuric ether. It has been employed by inhalation, and also by internal administration, in the ordinary way. In ten cases of malignant Cholera in the *Peckham Lunatic Asylum*, (England,) it was inhaled with complete success. The patient being in bed between warm blankets, and under the use of external as well as internal stimulants, is made to inhale chloroform as long as the bad symptoms recur. In one case, the inhalations were continued for the space of 24 hours. The mode of employing the article was by pouring a tea spoonful on a towel and applying it to the nose.

Several cases are reported in Braithwaite, No. 18, of the successful use of chloroform given internally, after the favourite brandy treatment had failed. These cases were exceedingly grave, but yielded to chloroform. Four drops added to an ounce of brandy, and six ounces of water, constituted the usual mixture, one-fourth of which was the common dose, repeated in one or two hours. The spasms, vomiting and purging soon yielded, and finally ceased. Cold rice and mucilaginous drinks, with chalk julap and nitric ether, made up the balance of the treatment.

I have not regarded, with favour, the introduction of chloroform into practical medicine; yet I am free to say, that in all malignant diseases which are likely to end fatally, despite of ordinary and well adapted means, as for instance, tetanus, hydrophobia and Asiatic Cholera, this and any other agent, no matter how potent, merits a fair and impartial trial.

The last remedy to which I invite your attention for a few moments, is *Tobacco*; and although I have been unable to learn how he employed this article, I find it stated, that *Raspail* has exhibited it with success. The statement, however, that attracted my special notice, was not made in France, but in Mobile, in the State of Alabama. Dr. Moore, a physician of that city, has announced very large success in the use of tobacco injections, made by adding a drachm of the leaf to a pint of boiling water. The quantity thrown up at once and the frequency of the injection do not appear in the statement.

The question, how did tobacco act? will be raised by every reader of this item of intelligence. We will attempt to solve the problem, by referring to the use of the same article in the management of arsenical poi-

soning. In *Silliman's Journal*, and in my *Elements of Chemical Philosophy*, may be found some of the facts touching the antidotal or remedial powers of tobacco for the poison of arsenic. The discovery was accidental. A young lady swallowed a poisonous dose of arsenious acid, in mistake. She resided at a spot remote from the residence of a physician, and the idea was entertained that an emetic, to dislodge the poison, was the best thing that could be attempted. An ordinary emetic could not be obtained, and tobacco was resorted to, in the shape of decoction. One table-spoonful after another was given, in the hope of exciting free emesis, but in vain. It was soon discovered, however, that the poisonous operation was checked; that at length, there was no deleterious result, and all this effected without an evacuation of the stomach, or any other perceptible action. Several cases of a like character were afterwards reported, and the true solution seems to be, that one poison counteracted another, by forming a sort of *tertium quid*, the *compound poisoning* of Christison, in which all poisonous properties are lost.

Now let us apply this philosophy to the treatment of the Choleraic poison by another poison, viz. tobacco, and it will hold equally good. It does not appear that the tobacco injections operated as they ordinarily do, in other cases, and the inference seems warranted, that the tobacco somehow or other, neutralises the poisonous influence which sets up the disease that we call Cholera. Having seen only a brief notice of the treatment by Dr. Moore, I am unable to cite his peculiar views, and therefore give my own explanation. The remedy is certainly entitled to respectful consideration.

Does any one inquire what are *my specific* views of treatment? I reply, that I have no regard for specific treatment, here or elsewhere. The *eclectic* practice, which applauds or condemns the lancet, and calomel and opium, and ice, and sugar of lead and lunar caustic; and measures the fitness of either by the special circumstances of each case, is the *only, proper* practice. If I found neither high vascular excitement, nor actual oppression of the circulating system, I would never bleed, and vice versa. If symptoms clearly indicated derangement of the liver and digestive organs, I would give calomel freely and often, but not otherwise. If spasms of the bowels were the most prominent manifestations, opium and camphor, with external stimulants would be liberally employed. And all other remedies would be regulated by the same rule. Stereotyped routine, in the management of disease, is abhorrent to nature and common sense.

We have made some allusion to *preventive* or *prophylactic* management, but it seems proper to be a little more specific on that point.

The *prophylaxis* has very important reference to the *mind*, as well as

to the body. The depressing and hurtful influence of fear has been prominent in the history of all great epidemics. It is of the utmost consequence to preserve mental tranquility, to be cheerful, to possess an honest conscience in the sight of God and towards man. With such a panoply, none will heed the panaceas of the day, nor hope to escape the calamity by flight. Let all feel that a wise Providence has sent the evil, and that the collected wisdom of earth cannot mark its metes and bounds. Hundreds who fled from the city, perished miserably in rural regions, so beauteous to the eye, that one might think the pestilence could not find a lodgement there.

It is quite certain that a rigid regard to the laws of hygiene, of diet and regimen will exert a most favorable influence on the mind. To this end, the utmost care should be observed to have every description of offal, filthy matter removed to a distant point, and there subjected to the chemical action of quick lime. Dwellings should be made perfectly sweet in every part, and chloride of lime should be liberally scattered in the cellars, and yards, to correct offending odors. I am aware that a very idle objection has been raised to the use of the chloride of lime, because of its unpleasant smell. To be sure if there be nothing of a foul nature to be corrected, the gas evolved may be a little disagreeable; if the cellar be only musty, however, and an indefinable effluvium be there, the chlorine of the chloride of lime will speedily destroy it, by seizing the hydrogen of the offending odor, and forming a new compound, destroying at the same instant, the integrity of the original effluvium. I have tested this point, very satisfactorily during this season and in former years, and have been surprised to find the characteristic smell of the chlorine so soon lost. It is not asserted that chloride of lime will certainly decompose choleraic poison, for we know not what that is. Yet we do know that Faraday decomposed the variolus virus by this agent and rendered it incapable of communicating small pox; we know also, that the chloride of lime has prevented the propagation of small pox and fevers called contagious, and we infer very properly, that it promises more than any other agent, to nullify the poisonous operation of the real cause of cholera.

But, as a help to this process of purification, we must add constant ventilation, by day and by night, when there is no obvious reason why the expedient should be suspended. And, as all these methods of attempting to avert or correct the evil, commend themselves to the common sense of mankind, we can perceive not the shadow of reason why they should not be punctiliously regarded.

Little need be said of the *preventive* use of *medicine*. It has already been stated that the sulphate of quinine in small doses has been employed with good effect, in this relation, and we esteem it a valuable article, for

the purpose. One or two grains daily will suffice, and cannot be improper unless some obvious constitutional impediment be in the way.

We apprehend that errors have been and will be committed, in respect of *diet* and *drinks*. Some persons eschew this and others that article of food, and often without a valid reason. And, therefore, we lay it down as a general rule, that the usual diet of a family, enjoying uniform good health, should not be materially altered, because of cholera alarms. The simple fact, that a manifest change is made in the daily food, is calculated to awaken fears, and suspicions, and thus to do harm. Articles, known to be indigestible or to offend the stomach or bowels, must be laid aside. Greens and fruits are apt to disagree with the digestive organs, because too freely indulged in, and great caution is needful. Well boiled rice seasoned with cinnamon or nutmeg, good rice pudding, and boiled milk are seldom hurtful, but very generally, the reverse.

The plainer and more simple the drink, the better. Pure water, in moderation, and made pleasant by the addition of ice, is generally salutary. If impregnated with the bitterness of quassia or chamomile, it will some times be still more beneficial. Soda water, prepared from the Soda powders, and taken two or three times a day, will often be useful. From 20 to 30 drops of the Essence of Jamaica Ginger, added to a wine glassfull of water, and moderately sweetened, will be found exceedingly grateful to the Stomach. This may be taken two or three times a day.

The man of business, fatigued by the duties of the day, will find advantage in a warm bath, twice or thrice a week. To some, the shower-bath is more grateful and not less salutary.

All should avoid excessive fatigue, and excesses of every kind. Exposure to bad weather, hot, or wet, or to night damps, will exert an unfavourable influence. And if the slightest manifestation of uneasiness pervade the stomach or bowels, let none forget, that the neglect of rest in a horizontal posture, for one or two hours, may lead to a formidable and perhaps a fatal seizure.

Care, in respect of *Clothing*, is very important as a means of preventing Choleraic attacks. Those who wear flannel, would do well to persist in its use, without intermission, or at least, throughout the season of Cholera; and those who are not accustomed to it, will find much advantage in a soft flannel bandage applied moderately tight to the abdomen. The bandage should be four inches wide, and three or four yards long; and, if desirable, it may be soaked in brandy, and should be well squeezed before it is applied. The influence is more than mechanical; and will be found exceedingly useful where there is a tendency even to looseness of the bowels. In addition, we remark, that those who go out after dark, and are exposed to damps and dews, should protect the body by suitable

additional covering. In short, every thing that caution and prudence can suggest, in regard to the salutary effects of protection from sudden vicissitudes, is augmented in importance, as a means of guarding the system against the visitation of Cholera.

I have thus, Gentlemen, endeavoured to comply with your respectful request. And in doing so, I have purposely avoided to enter into the speculations associated with the subject, because of my conviction, that their practical bearing is not salutary. Disclaiming all pretensions to originality or novelty, I submit the lecture, as a brief summary of all that I hold to be valuable in the history of the great and terrible Epidemic.

DIETETIC TABLE.

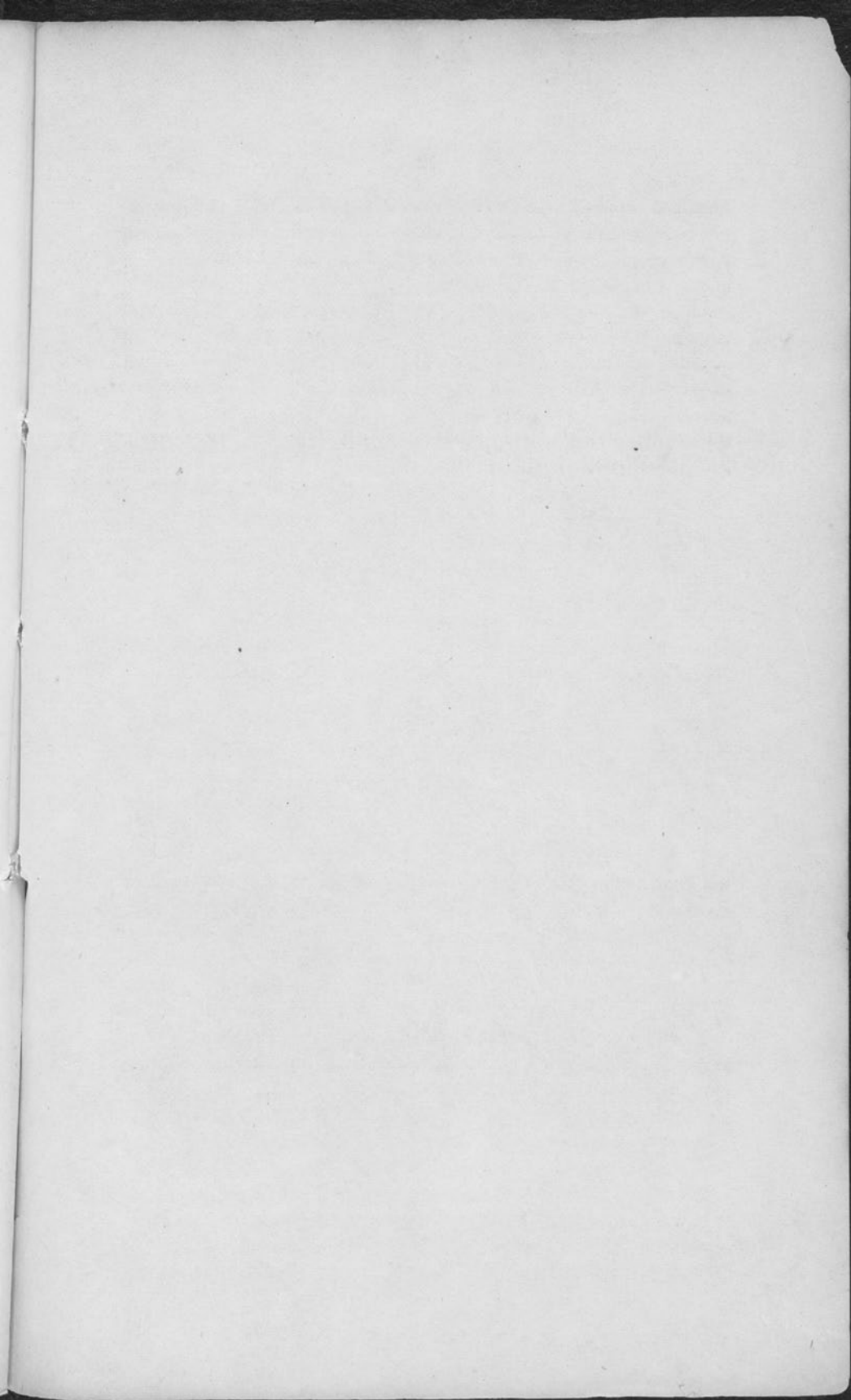
The following may be regarded as *safe* or *unsafe* articles for family use, *generally*, in the season of Cholera. Those marked *safe*, to be taken in moderate quantity.

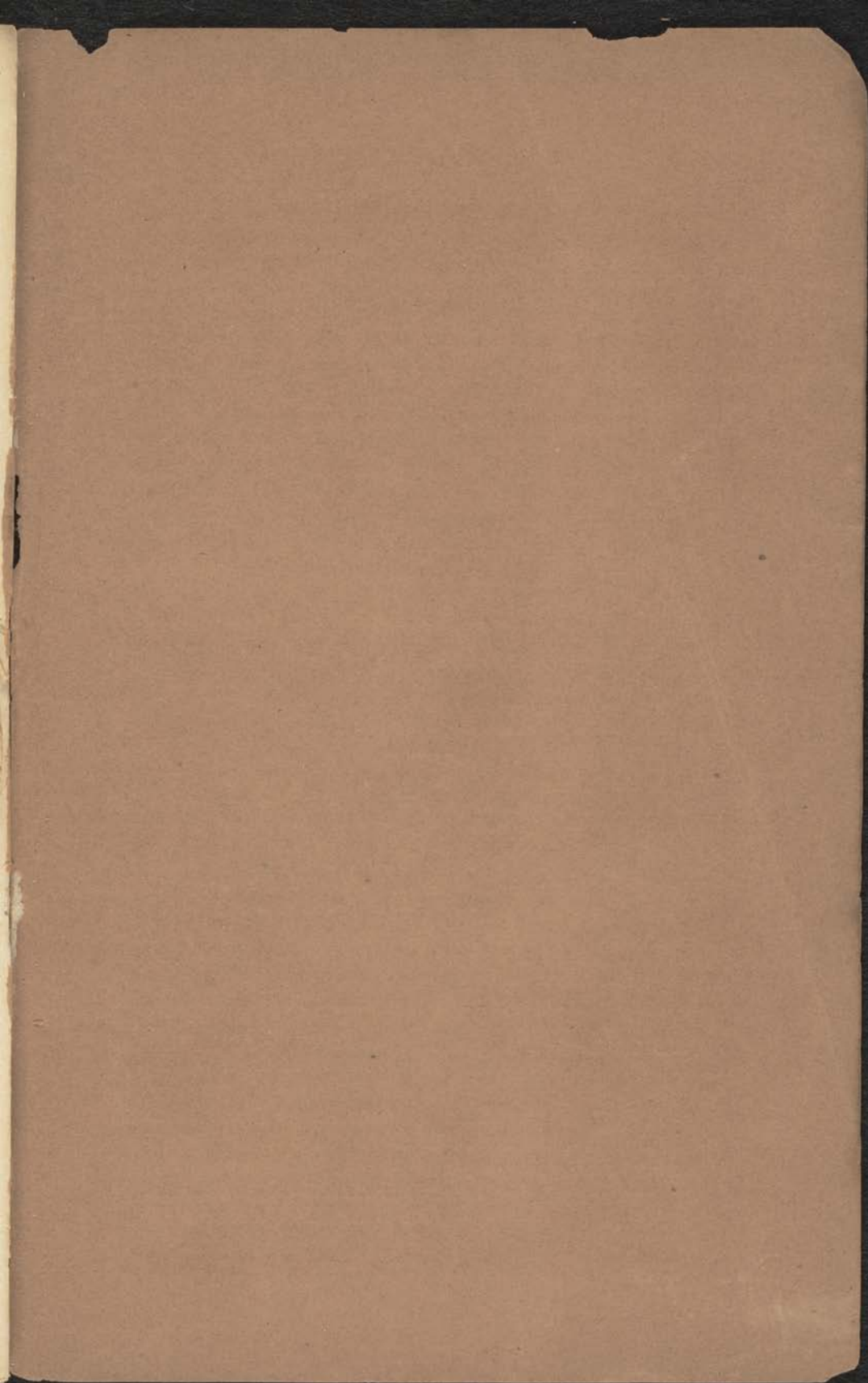
SAFE.

Beef Steak. Beef Tongue. Dried Beef. Mutton. Chickens. Ham, boiled or broiled. Mackerel. Smoked Herrings. Rice. Toasted Bread. Crackers. Good Potatoes, roasted. Mustard. Horseradish. Salt. Pepper. Good Vinegar. Black Tea and Java Coffee. Iced Water. Iced Lemonade. Iced Claret. Soda Water. Ice Cream.

UNSAFE.

Fresh Pork. Veal. Fresh Fish. Oysters. Greens generally. Unripe Fruits. Fresh Warm Bread. Sour Bread. Molasses and Water. Common Alcoholic Drinks.





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☞ The Spring Course of Lectures will commence about 16th March, 1850. Degrees will be conferred about 16th July, 1850.

For further information, inquire of

JAMES McCLINTOCK, M. D., DEAN,

No. 1 North Eleventh Street.

PHILADELPHIA, May 29, 1849.